

Appl. No. 09/954,656
Amendment and/or Response
Reply to Office action of 20 January 2004

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REMARKS / DISCUSSION OF ISSUES

Claims 1-9 are pending in the application.

The applicants thank the Examiner for acknowledging the claim for priority and receipt of certified copies of all the priority documents.

The applicants respectfully decline to add section headings, as they are not required in accordance with MPEP 608.01(a).

Claim 8 is amended to correct a grammatical error. No new matter is added, and the scope of claim 8 is unchanged.

The specification is amended to replace a reference to a European patent publication with its corresponding U.S. patent 5,075,589, issued to Derks et al. (hereinafter Derks).

The Office action rejects:

claims 1, 2, and 9 under 35 U.S.C. 102(b) over Derks, referenced above;
claims 3 and 4 under 35 U.S.C. 103(a) over Derks; and
claim 7 under 35 U.S.C. 103(a) over Derks and Saito et al. (USP 4,797,593, hereinafter Saito).

The applicants respectfully traverse this rejection.

Claim 1, upon which claims 2-4 and 7 depend, and claim 9 each specifically recite a cathode carrier with a cathode coating comprising two different grain size distributions of oxides of scandium, yttrium and the lanthanoids. The advantages of such a bimodal distribution of grain sizes is presented at page 2, lines 7-22 of the applicants' specification.

The Office action relies upon Derks for teaching a cathode coating comprising two different grain size distributions oxides of scandium, yttrium and the lanthanoids, and specifically cites Derks column 2, lines 27-29 for this teaching. The applicants respectfully disagree with this characterization of Derks.

Derks teaches a cathode coating that includes a single grain size distribution of the oxides of scandium, yttrium and the lanthanoids. At the cited text, Derks specifically teaches a grain size distribution of $d_{50}=4.5\text{ }\mu\text{m}$. At other sections, Derks teaches the use of other grain size distributions oxides of scandium, yttrium and the lanthanoids, but Derks does not teach or

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suggest forming a coating that comprises two different grain size distributions of oxides of scandium, yttrium and the lanthanoids.

Because Derks does not teach a cathode coating that comprises two different grain size distributions of oxides of scandium, yttrium and the lanthanoids, as specifically claimed in each of the rejected claims, the applicants respectfully request the Examiner's reconsideration of the above claims over Derks.

In view of the foregoing, the applicants respectfully request that the Examiner withdraw the rejections of record, allow all the pending claims, and find the application to be in condition for allowance. If any points remain in issue that may best be resolved through a personal or telephonic interview, the Examiner is respectfully requested to contact the undersigned at the telephone number listed below.

Respectfully submitted,



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